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ABSTRACT

This paper draws from data on 123 languages to examine the semantics of comparative systems in an attempt to define as closely as possible the relationships that exist among three basic types of constructions and among their constituents. It is determined that superlatives mark absolute disparity, that comparatives mark relative disparity, and that superlatives and comparatives are more closely related to each other than to equatives. Analysis of degree marker types reinforces the close relationship between comparatives and superlatives as opposed to equatives. Suppletive paradigms furnish yet another link in the chain of evidence relating comparative and superlative on the one hand and positive and equative on the other. The markedness hierarchy theory, i.e., that the superlative is more marked than the comparative and the latter more than the positive, is further supported by the fact that superlative degree markers may be derived from comparative degree markers but not the converse. Appendixes include: tables of standard and degree markers, of hypotactic marker types, and of formal identity or near-identity of markers. (Author/AM)

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SOME FEATURES OF BASIC COMPARATIVE CONSTRUCTIONS

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ABSTRACT

Three basic comparative predication: equative, comparative (of inequality) and relative superlative, are examined in terms of grammatical and semantic features to determine their interrelationships. Both comparatives and superlatives indicate qualitative (or quantitative) disparity between the item compared and the standard of comparison but, while comparatives mark relative disparity, superlatives mark absolute disparity as shown by the definiteness of the latter and frequent occurrence of 'all' as a standard. However, comparatives and superlatives are more closely related to one another than to equatives as shown by frequent formal identity of degree and/or standard markers and syncretization of both categories. Paratactic comparisons often have standards marked by contrastive features (antonymous, negative, adversative). This is paralleled in hypotactic comparisons of inequality by the greater frequency of separative standard markers (ablative, partitive - genitive, negative), reflecting the differences between compared item and standard; but many are marked by sociative features (dative, relative, instrumental-comitative), reflecting their similarities. Superlative standard markers tend to be more separative than sociative. Analysis of degree marker types reinforces the close relationship between comparative and superlative as opposed to equative. While all three are often unmarked, particularly the equative; the major marked types are frequently identical in the comparative and superlative but different in the equative. Suppletive qualitative paradigms also show shared bases between the comparative and the superlative but rarely between either of the latter and the equative. The markedness hierarchy theory, i.e., that the superlative is more marked than the comparative and the latter more than the positive, is further supported by the fact that superlative degree markers may be derived from comparative degree markers but not the converse and that superlatives are often definite, comparatives indefinite or unmarked.

1. Introduction

One cannot say that the subject of comparative markers and constructions, unlike many other domains of grammar, has been neglected in the literature. Aside from a fairly large number of more or less detailed analyses of comparatives and superlatives in individual languages (see bibliography), there have been several more general studies involving data from two or more languages on aspects of comparative systems (Canger 1966, Raun 1960, Small 1929, Valin 1952, and Ziemer 1884, to cite a few). Most of the general treatments were oriented toward explanation of the semantics of comparison and, with few exceptions, drew on data from languages that are genetically related. In the present paper, I also propose to examine the semantics of comparative systems in an attempt to define as closely as possible in general and, where feasible, universal terms the relationships that exist among certain basic types of constructions and among their constituents. To do so, I have had recourse to data from 123 languages reasonably well distributed both genetically and geographically. Although the figure may sound impressive, one should keep in mind that many of the sources are incomplete, concentrating on a particular aspect of the subject or covering the comparative system in a brief or sketchy manner. Still, there is sufficient cross-language data to substantiate or repudiate some of the claims that have been made on the basis of typologically more restricted data.

The general subject of comparison encompasses an intricate variety of construction types. Thus, for example, proportionate or correlative comparisons equivalent to the ENGLISH the more the merrier type are found in many languages (e.g., GERMAN je mehr desto besser, FRENCH plus on est jeune, plus on est agile, FINNISH mitä enempi sitä parempi 'the more the better'). Another widespread type involves comparison of two qualitatives as in: She is as beautiful as he is ugly, The room is higher than it is wide, or analogously of two acts (or states) as in:

He floated rather than swam to the dock. Or a substantive may function as a qualitative: John is more of a man than George.¹ Then there are comparative or superlative qualitatives that cannot be used predicatively in comparative constructions, such as: upper, outer, former, uppermost, etc. Thus we can say: the upper shelf but not *This shelf is upper than that one. These are comparatives and superlatives that cannot be used predicatively. The constructions they occur in do not contain overt standards of comparison. Also originally comparatives but now used only noncomparatively are disjunctives like LATIN uter, ENGLISH either, whether, or FINNISH kumpi 'which of two?', jompikumpi 'either one or the other'. Since it would be impossible to discuss them all effectively in a paper of this size, I have chosen to concentrate on what I feel to be three primary constructions: the equative (or comparison of equality), the comparative (or comparison of inequality, superior or inferior) and the relative superlative. Furthermore, these will be dealt with essentially as they figure in predicative, rather than attributive, constructions. By "predicative" I refer to those constructions in which the qualitative constituent (usually adjective or verb) functions as a predicate.

2. Differences and similarities

2.1 Let us begin with the assumption that all languages have ways of expressing at least four "degrees" of predicative comparison, as in the following examples from ENGLISH:

- (1) Positive: John is tall.
- (2) Equative: John is as tall as George.
- (3) Comparative: John is taller than George.
- (4) Superlative: John is the tallest of the boys.

¹ Jespersen (1965, 80-81) suggests that: "The more special an idea is, the less use there will be for degrees of comparison. And where we do find in actual usage comparatives or superlatives of substantive forms they will be seen on closer inspection to single out one quality and thus mean the same thing as if they were formed from real adjectives."

The question arises whether positive is really a degree. In traditional and most pedagogical grammars, this is taken as a primitive and is included in the comparative system without justification. Yet, whereas the remaining degrees may be overtly marked, the positive never is. As far as is known, this is true of all the languages sampled. However, formally unmarked qualitatives may be said to be semantically (or lexically) marked in terms of restrictions of occurrence in equative, comparative and superlative constructions. Thus in all languages there is undoubtedly a class of qualitatives that cannot figure in comparative constructions. In ENGLISH, for example, the adjective upper does not appear in either equative or comparative degrees, although it does have a superlative in uppermost. The latter in turn is an example of a highly restricted formal class of superlatives in -most (cf. foremost, topmost, innermost, etc.). There must also be an almost infinite number of relative degrees of comparability inherent in the different qualitatives of any language. While an adjective such as dead is found in comparative constructions (as dead as he can be, deader than a doornail, etc.), it can hardly be expected to occur in them with anywhere near the frequency of say big since the former describes a fixed state (an animal can only be dead or alive) whereas the latter may represent any of a large number of points on a scale of reference delimited by the sizes of the item compared and the standard of comparison (see 3.1). Therefore, when qualitatives which do occur in comparative constructions appear as positives, they may be said to be inherently comparable,² or in Whorfian terms cryptotypically comparable.³ Thus sentence (1) above really means

² One might object that qualitatives otherwise implying comparison do not do so in certain contexts, notably when a specific quality or dimension is implied as in: How long is it? (Five feet.). However, while the implied answer is superficially specific, it only has meaning in terms of some scale of measurement which in itself implies comparison with other measurements made against the same scale.

³ Such qualitatives correspond to Sapir's (1958, 123-4) "implicitly gradable but ungraded" as opposed to "explicitly graded and implicitly quantified", corresponding roughly to our comparatives. Small (1929, 11) also comments on the underlying comparability of positives.

that John is tall with regard to all the other boys or men of the particular class the speaker has in mind. An automatic, subconscious comparison of this sort is always implied when using such a qualitative. This kind of comparison is broad, undefined in the sense that no claim is made as to superiority, inferiority or parity of height with any particular member or subgroup of the implied standard, rather that the subject John possesses the given quality in a more-than-average degree with respect to the members of the standard class as a whole.

2.2 In sentences (2), (3) and (4), however, we have correspondingly narrower, more closely defined comparisons. So, the equative degree basically indicates approximate parity in height between John and George. In its unqualified form, the English construction may imply absolute parity or slight superiority or inferiority of height between the two subjects, dependent upon the context.⁴ This can be and often is further defined by the addition of a limiting adverb like: almost, just, at least, etc. This imprecision is due to the semantic neutrality of the equative markers as...as (i.e. as 'like, similar to'), but in some languages the corresponding device is more narrowly defined. Thus, in the KOREAN construction, the standard of comparison is attributive to a noun meaning 'size', the whole implying absolute parity between item compared and standard: san man nophin "mountain size [it] is-high" 'It is as high as the mountain.' Similar to this type in ENGLISH is a class of endocentric compounds like: stone-dead, jet-black, and others. And in FINNISH, the qualitative is marked by an adverb meaning 'equally' (yhtä, partitive of 'one') and the standard by a conjunction meaning 'like, as' (kuin, also used to mark comparison of inequality): hän on yhtä iso kuin minä 'He is as big as I.' A different type is found in HAUSA: dokinsa ya yi karfin nawa "horse-his he goes-toward strength-of mine" 'His horse is

⁴ Compare Sapir's (1958, 136) view of the semantics of the equative: "But it seems more satisfactory, on the whole, to define 'equal to' in a more negative spirit, as a more or less temporary point of passage or equilibrium between 'more than' and 'less than' or as a point of arrival in a scale in which the term which is to be graded is constantly increasing or diminishing."

as strong as mine.' Here the item compared is clearly inferior in strength to the standard, the implication being approximative. In MANDARIN, one way of representing absolute equality is with iyang: shoei gen huoo iyang weishean "water with fire is-equally dangerous" 'Water is just as dangerous as fire.'

2.3 The comparative degree denotes relative qualitative disparity between the two subjects of comparison. That is, the item compared is superior or inferior to the standard where the latter does not include all members of the class to which the former belongs. It has been argued that this is not always true since there are sentences like: He is bigger than all the others. as opposed to: He is the biggest of all. But the semantic interpretation of the standards of comparison is different in these two sentences. In the first, the underlying comparison actually consists of the summation (= all the others here) of a series of individual comparisons, i.e., *He is bigger than A, he is bigger than B, he is bigger than C, and so on. This is overtly demonstrated in sentences like: He is bigger than John, George and Tom. which is merely three parallel, binary comparisons reduced to a single sentence through ellipsis of he is bigger than. In the second, the actual comparison is a simultaneous one between he and all the members of the standard class. The fact that he is absolutely superior in size to the other members of the class is further indicated by the presence of the definite article as opposed to the unmarked or indefinite character of the qualitative in the comparative. This association of definiteness with superlative and indefiniteness with comparative (indefinite because the comparison is relative) is also found in many other languages aside from ENGLISH (see p.139). Furthermore, the fact that in all languages examined by far the most common standard in superlative constructions was a term equivalent to ENGLISH all offers additional support for the thesis that the standard in such constructions must include all members of the class in question.

2.4 The superlative degree indicates absolute disparity between the subjects of comparison in that the item compared is superior or inferior to the standard where the latter includes all members of the class of which the former is a member. Since comparative constructions basically represent simple binary comparisons, it is only natural that comparisons involving only two items should be expressed by comparatives. Yet, occasionally a superlative is used instead: of the two, John is the strongest. Any peculiarity, however, is only apparent. The item compared, in this case, is of necessity naturally definite (since the strongest can only refer to one person) and the standard, two, includes all members of the class. Thus on both counts a superlative is a logically acceptable alternant. As to why it should be used at all, the definiteness factor, normally associated with superlatives, may provide a clue.

2.5 As noted above, comparatives and superlatives share the notion of qualitative disparity and, as both Valin (1952, 7) and Small (1929, 11-12) have suggested, both constructions represent binary comparisons, differing only in that the comparative is explicit and the superlative implicit. That is, the superlative represents a series of two or more mental comparisons (each one binary). Thus, as others have noted before (e.g. Jespersen 1965, 245-6; Rohr 1929, 10-11; Sapir 1958, 144-5), semantically comparatives and superlatives are slightly different aspects of the same basic concept. This is often borne out by partial or even total formal identity of degree and standard markers in the two constructions (as in AMHARIC, SYRIAN ARABIC, MODERN GREEK, HUNGARIAN, RUSSIAN and TAGALOG, to name but a few) and also by a tendency for comparative and superlative degree categories to syncretize in some languages (e.g. replacement of original superlative by comparative plus the definite article in FRENCH) as opposed to similar identification between equative and either comparative or superlative which is at best rare (see 6).

2.6 Differing from the relative superlatives just discussed are the absolute superlatives,⁵ also referred to by some as elatives, such as: a most interesting tale. Characteristically, items thus compared are not to be taken as possessing the given quality in the highest degree, rather in a very high degree. Whereas relative superlative constructions include a definite standard of comparison, absolutes lack any specific standard. Formally, relative superlatives are often marked for definiteness vis-à-vis absolutes which are either indefinite or unmarked. The absence of a true standard of comparison makes absolute superlatives in a sense "incomparable," hence beyond the pale of comparative systems.

If these are not quite comparative in function, what are they? Many languages show identical or near-identical marking between various kinds of emphatic constructions and what appear as absolutes (formally but not semantically superlative) in other languages. Thus devices often used to represent emphatics, notably reduplication (of the qualitative) and intensive adverbs, are much in evidence whereas the use of relative superlative markers, as in the English example cited above, appear to be rarer.

Sapir (1958, 146) felt that the latter type could probably be explained as resulting from a shift in the perspective (i.e. standard of comparison) in which an original relative superlative is viewed with subsequent weakening in intensity of the qualitative. That is, an item superlative to all the members of the same finite subclass in some respect may later come to be viewed in terms of all the members of the class that includes the original standard, one or more of which may actually be superlative to the original superlative, hence resulting in a relative weakening of semantic intensity. This would account for the many recorded instances

⁵ This is not to be confused with Sapir's (1958, 145-6) use of the term which refers to a logical absolute like: the most interesting tale (possible, imaginable). For additional views on absolute superlatives, see especially Jespersen (1965, 247-8), Rohr (1929, 99), Pound (1901, 57) and Borst (1902, 9-10).

of former relative superlatives that have developed into absolutes or emphatics such as LATIN -issim-in: Horatio hōrum omnium fortissimus est 'Horatio is the bravest of all.' which became an absolute in FRENCH: il est richissime 'he is very wealthy'. Absolute superlatives in turn generally tend to be subject to further weakening through excessive use, ultimately returning to the status of positives in some cases.

3. Definitions

3.1 Before continuing with our discussion of basic comparative constructions, it would be best to provide operational definitions for certain fundamental terms including some that have already been alluded to.

There are five primary constituents to be considered in any pre-dicative comparative construction. Three of these are primitives:

- (1) The item that is compared with or against some standard of comparison.
- (2) The standard of comparison against which (1) is compared.
- (3) The quality or quantity in terms of which (1) is compared with (2).

The remaining two, which constitute the characteristic markers of all comparative constructions, may be identified both semantically and grammatically as follows:

- (4) The standard marker, which is in constituency with (2), marks the relationship between (2) and (3).
- (5) The degree marker, which is in constituency with (3), marks the degree of presence or absence of (3) in (1) with respect to a given (implicit) value of (3) in (2).

Generally speaking, the item compared is the subject of the clause, the qualitative the predicate and the standard the complement.⁶

⁶ A rather interesting confirmation of the fact that the standard of comparison functions as a complement can be seen in the stylistic fluctuation between subject and object forms after than in ENGLISH: he is older than I (somewhat formal) vs. he is older than me (informal). Although the subject form reflects the actual derivation, the object form tends to replace it, at the same time making a preposition of than, the entire phrase thus becoming the complement of the predicate.

Of the five, constituents one through four are obligatory; five appears to be optional. That is, there are languages in which a degree marker is obligatory (e.g. ENGLISH, FRENCH, RUSSIAN, HUNGARIAN, KANURI, SAMOAN); others in which it is optional (e.g. EASTERN CHEREMIS, COPTIC, KUI, MALAGASY, YURAK); and still other in which there is no overt marker (e.g. WORRORA, CLASSICAL MANDAIC, ARAMAIC, GUJARATI, ESKIMO, JAPANESE, TELUGU).

However, in view of the fact that positives which may occur in comparative constructions are inherently comparable (see 2.1), it may be more logical to think of cases of optional or nonoccurrent degree marker as instances of covert marking (inherent in the qualitative) in the context of the standard marker. If this should prove to be a valid assumption, all five constituents would be truly universal features of comparative constructions.

The identification of degree and standard markers is sometimes problematic. This is more especially so with some equative constructions. While languages with clearly discrete degree and standard markers like FRENCH aussi (degree)...que (standard) are fairly numerous, there are also many that form equatives solely or primarily with monomorphemic markers (or at least those apparently not susceptible to analysis into two components), standard markers that semantically often contain what one would intuitively consider to be degree markers.

Thus in SYRIAN ARABIC, for example, the standard in equative comparisons is commonly marked by a preposition (in terms of our definition, this alone would identify it as a standard marker), ma'tal 'like, as' or ?add 'as much as', the meaning of which seems to be closer to the function of a degree marker than that of a standard marker. ENGLISH like is used in much the same way. In SOTHO, a verb meaning 'surpass, excel' assumes the marking function in the comparative (also the superlative): ōufēta kabōtlē "he-thee-surpasses in-beauty" 'He is more handsome than you.' Here again, applying the

criterion of immediate constituency, fēta 'surpass' must be regarded as a standard marker since it is in constituency with its object which is equivalent to the standard of comparison in spite of the fact that it obviously contains a semantic feature of degree. Perhaps such markers should be analyzed as constituting a special subclass (semantically defined) of standard markers.

3.2 Since ellipsis plays a great role in the derivation of comparative constructions, we will have occasion to make a distinction between paratactic and hypotactic sentences. For our purposes, a paratactic sentence consists of two coordinate clauses, each containing a qualitative (relevant to the comparison), such that the qualitatives of both clauses are either identical (or synonymous) or antonymous, and the items compared and standards of comparison function as the subjects of their respective clauses. In NUER, both qualitative types are found in comparative constructions: (1) identical (with an adversative conjunction), as in: gátmàar díitè, kè díid nè yán "my-brother is-big, but big am I" 'I am bigger than my brother.' (2) antonymous, as in: díid nè jín, kwiy nè yán "big are you, young am I" 'You are older than I.'

A hypotactic sentence consists of two clauses, one independent composed of an item compared and a qualitative and another dependent, the complement of the independent clause and linked to it by the standard marker, composed of a standard and a surrogate for the qualitative of the independent clause and linked to it by the standard marker, composed of a standard and a surrogate for the qualitative of the independent clause. The qualitative surrogate may be subject to ellipsis.

4. Standard markers

4.1 Earlier scholars writing on the subject of comparison have advanced the thesis that hypotactic comparisons evolved from paratactic constructions (see Small 1929, 14-15, on INDO-EUROPEAN and Ziemer 1884, 10, 67, *passim*). While logically this is a reasonable supposition,

actual evidence in support of it on a general scale is lacking. However, there are certain striking similarities and parallelisms between the two kinds as regards the basic comparative constructions. An examination of all examples of parataxis found in the present sample shows that there are two fundamental features which, broken down into a small set of subtypes and cooccurring in several combinations, can account for all of them. One of these is essentially equivalent to a standard marker. It characteristically marks a contrast or opposition between the two clauses. The subtypes encountered are: antonymy (ant) of the lexical values of the two qualitatives, negation (neg) and aduerseness (adv). The other consists of different degree markers found here in three subtypes (although other types undoubtedly may be found): regular comparative degree markers (ER), intensive adverbs like very, too, extremely (VERY) and verb forms meaning 'surpass, excel' (SURPASS). The combinations in which these features occur in parataxis are summarized in the following table:

<u>Construction</u>	<u>Markers</u>		<u>Example</u>
	<u>Standard</u>	<u>Degree</u>	
comparative	ant	Ø	GUNDUNGURRA
	ant	ER	LAPP
	ant	VERY	GUMBAÍNGAR
	neg	Ø	MOSQUITO
	neg	ER	CHEREMIS
	adv	Ø	NUER
	adv	ER	PITJANTJARA
	adv	VERY	JAPANESE
	Ø	Ø	KINYANZ _A
	Ø	ER	AMHARIC
superlative	Ø	VERY	DINKA
	Ø	SURPASS	GREBO
	adv	Ø	NUER
equative	adv	SURPASS	NUER
	Ø	Ø	KINYANZ _A
equative	Ø	Ø	THURRAWAL

Note that by far the most recurrent types of standard markers are contrastive in function. In only five of the 15 comparative and superlative subtypes are they lacking. As we shall see later (4.2), the contrastive markers are paralleled by a relatively large number of congeners in hypotactic constructions. Thus even if a unidirectional theory of evolution from parataxis to hypotaxis is untenable, the notion is a useful one in determining the simplest and most logical rules for the derivation of many hypotactic comparative constructions. In the following CHEROKEE sentence, for instance, we have an example of one possible intermediate stage between parataxis and hypotaxis: utli nikatv, eska ayy "more he-is-big, less I" 'He is bigger than I.' Eska 'less', an antonymous predicate here, could develop into a standard marker.

One kind of parataxis I have not touched on and which is not included in the above table is the comparative question in some languages. In such questions, there is no standard marker. An example which also occurs without degree marker may be cited from PERMIC CHEREMIS: awat poməš šokšo? acat poməš šokšo?⁷ "mother-your bosom warm? father-your bosom warm?" 'Is your mother's or your father's bosom warmer?' The absence of a standard marker is not surprising since the potential standard is unknown to the interrogator, only being made clear in the response, e.g. 'My mother's bosom is warmer than my father's.'

4.2 A survey of standard markers that appear in hypotactic sentences yields an almost bewildering array of superficially distinct semantic types. If, however, we set aside the rarer ones and concentrate on those that are more commonly found with a wider distribution, a relatively small number of recurrent features soon becomes apparent.

Among comparative constructions (comparison of inequality), close to half the languages sampled employ standard markers with a dominant separative component, i.e., one which denotes separation, removal or

⁷ The source for this citation is Raun (1960, 153). The lower case theta (θ) is undoubtedly a vowel symbol but I have no information as to its value at this writing.

singling out from the object or group represented by the standard. These are in the main ablatives. In JAPANESE, the marker takes the form of a postposition: satowa kawa yori chikashi "village river from is-near" 'The village is nearer than the river.'; in EGYPTIAN ARABIC, it is a preposition (proclitic): ?il- ?aflá:m ?âhsan mik-kútub "the-films better from books" 'Films are better than books.'; in TURKISH, a suffix: Türkiye Lübnan' dan büyiktür "Turkey Lebanon-from is-big" 'Turkey is bigger than Lebanon.' In FINNIC and some other URALIC languages, the use of the partitive case suffix, descended from an original ablative, is common alongside the elative (= ablative) as in FINNISH: hän on minua vanhempi "he is me-partitive older" 'He is older than I.' Ablative or ablative-derived constructions constitute by far the commonest type. In at least six languages (ESKIMO, FINNISH, GEORGIAN, GREEK [CLASSICAL and MODERN], LAPP and RUSSIAN), genitives figure as primary or secondary standard markers. Genitive categories often include both partitive and ablative functions which would tend to link these cases with the notion of separation.

The second most important category comprises a number of negative marker types. Thus in LITHUANIAN, either an ablative preposition or nei 'neither, nor' or nè negative particle may be used: jiě yrà labiaù energìngi nei gâbùs "they are more energetic nor [=than] gifted". In a recent article, Joly (1967) presents a convincing argument for tracing ENGLISH than to the OLD ENGLISH instrumental singular neuter demonstrative pon plus the negative particle ne. Compare also the use of nor instead of than in SCOTCH ENGLISH and other dialects. In POLISH, one set of common standard markers is based on a negative particle plus a relative with or without the interrogative particle, as in: świętej kozie jest o wiele lepiej niż normalnej, nieświętej 'A holy goat feels much better than a normal, nonholy one.' In JAPANESE, the postposition hodo, which is approximative in meaning, occurs as a standard marker only in conjunction with a negative verb: kono nikuwa ano niku hodo yawarakaku arimasen "this meat that meat approaching

tenderly is-not" 'This meat is not as tender as that meat./This meat is less tender than that meat.'⁸ It should now be apparent that the paratactic comparatives described above (4.1) marked by negative particles directly parallel the hypotactic constructions just cited and the adversative and antonymous types are closely related semantically to both the separative and negative hypotactic constructions.

Opposed to the idea of separation or contrast is one of association or attraction. Standard markers of this kind, sociatives, are generally rarer than the separatives, falling into several subtypes. The two most often found in the present sample were: (1) dative, as in KANURI: ātāma tútūro ngéla go "this-emphatic that-dative is-good more" 'This is better than that.' (2) relatives, all involving interrogative-relatives many of which contain an instrumental element, as in ESTONIAN: mees on vanem kui naine "[the] man is older than (< interrog.-rel. + instr.) [the] woman", or compare LATIN quam (acc. sg. fem. of interrog.-rel. pron.). Note also the occasional use of the instrumental case suffix in the same function in SANSKRIT.

About as numerous as the datives are forms that either function only as standard markers, are inherent terms of comparison, or are otherwise unidentifiable as to historical origin. Thus in GUJARATI, aside from ablative or locative enclitics used in comparatives, there is a third one that occurs solely in such constructions: e mahra kartaN moto che "he me than old is" 'He is older than I.' In MANDARIN, a verb meaning 'compare' may serve the same purpose: nii bii ta dah ma? "you compare he old interrogative" 'Are you older than he?' For this group, little can be said without etymological information.

The remaining types found during this investigation were too sparsely represented to permit generalization. However, they do deserve brief mention for different reasons. The first of these is

⁸ Of course, a common means of producing a comparison of inequality in many if not all languages is the negation of an equative. In general, I have not gone into this technique in the present paper. However, the JAPANESE example differs somewhat from the others in that the corresponding affirmative construction, which would presumably be an equative, does not occur at all. In some INDOEUROPEAN languages, the standard markers for comparisons of inequality originally occurred only with negative qualitatives (e.g., ANCIENT GREEK *hōs*, LATIN *quam*, GERMAN *wie*, et al.). Thus, when these later came to be used with positive qualitatives, they assumed the additional function of marking equative standards.

formally and semantically identical with certain kinds of degree markers. For example, in LAO a form that may occur in both attributive (as degree marker) and predicative (as combined standard and degree marker) constructions is found: nok kháo nòi kúa nok kēn kē "[the] dove (nok kháo) is-small more-than [the] pigeon (nok kēn kē)". In KONKOW, most qualitatives are verbs. To form the comparative, a verb meaning 'to excel, get the best of' is compounded with the qualitative and the standard appears as the object of the new verb: mỳmsa ník ?ònkahélin "he-is me excel-big" 'He is bigger than I.' A second minor type consists of a locative marker. As we shall see, in the discussion of superlatives, this is of particular interest. In some of these cases, "locative" is obviously used as a cover term which may or may not include ablative, dative or other functions noted above in connection with standard markers; in others, the term is used in the basic sense of '(in a) place where'. Thus in HUNGARIAN, apart from a marker containing an interrogative-relative element and an ablative (in some dialects), we also find a locative suffix similar to FRENCH chez: János nagyobb Józsefnál "John [is] bigger Joseph-at." Such markers may possibly reflect a sociative type. Still a third type is one in which the marker has extremely broad, general functions as a relational outside of comparative constructions. Most often, these basically mean something like 'with respect to, as regards..., etc.' which would seem to be closer to the sociative type, but sometimes they may also function as ablatives. In ZULU, the marker is prefixed to the standard: izimvu zincane kunezinkomo "sheep small with-respect-to-cattle" 'Sheep are smaller than cattle.' In SAMOAN, the equivalent preposition is glossed variously as 'with, to, in, at, for, about, on, from' and also serves to mark the direct object of the verb and the possessor with an existential verb translatable as 'have' in such constructions. The last minor type, already mentioned above in connection with separatives, is the genitive as in RUSSIAN: on stárše m'ená "he [is] older of [=then]-me".

Summing up for the semantics of comparative standard markers, we find two major types, the most frequently occurring of which may be broadly characterized as separative or contrastive in nature, emphasizing the differences between the compared item and the standard of comparison, and the other essentially sociative in nature, emphasizing the similarities between the two objects of comparison.⁹ Of the minor types encountered, most genitives are probably to be equated with the separatives, as are some locatives. But other locatives, such as HUNGARIAN -nál/ -nél, are more like sociatives and some do not fit either category. Pure relationals are usually so broadly defined that they may be made to fit any category and the 'more than' (MORE) or SURPASS type has a clear affinity with the same type of degree marker.

4.3 The three major types of standard markers found in superlative constructions are ablative, locative and genitive. Among the languages sampled, these were found to occur with almost equal frequency. Superficially, the ablative occurs slightly more often than the other two but, if we include with the genitives the few instances of partitives and possibly also of attributives, the genitive category shows an even higher frequency of occurrence than the ablative. Lumping them together into one class seems perfectly justifiable, especially since the obvious explanation for the marking of a superlative standard by means of a genitive (this applies as well to an ablative) is that the partitive function, so often associated with genitives, is really what is at issue in such cases. Examples of these types follow:

Ablative, as in AMHARIC: kə-hullu yamral "from-all he-is-hand-somer" 'He is the handsomest of all.'

Locative, as in TAMIL: ēlla malaikalilum inta malai uyaramānatu "all mountains-loc. -too this mountain is-high" 'This mountain is the highest of all.'

Genitive, as in RUSSIAN: on vs'ex stárše "he all-gen. older" 'He is the oldest of them all.'

⁹ For additional discussion of the separative and sociative aspects of comparison, see Joly 1967, Small 1924 and 1929, Valin 1952 and Ziemer 1884 among others.

There is a relatively large gap between the major and minor types in terms of frequency of occurrence. However, those of the latter that are worthy of mention are the MORE or SURPASS, pure relational and dative types as in the following examples, respectively:

TSWANA: Motshabi omonnye gofeta bana bôthê "Motshabi is-small to-surpass children all" 'M. is the smallest of all the children.'

TAGALOG: siyá'y ang maliít sa lahát "he the small oblique [= relational] all" 'He is the smallest of all.'

SINHALESE: mē lámayā hama lámayinta ma vâdâ hoñda y "this boy all boys-dat. emphatic more good is" 'This boy is the best of all.' A similar construction marked by an ablative in lieu of the dative is also found.

4.4 Equative standard markers are somewhat more difficult to characterize in general terms than either comparative or superlative markers. This is at least in part due to the fact that equative constructions are often omitted from any systematic discussion of comparative structures, usually limited to the positive-comparative-superlative model. Thus the investigator is forced to ferret them out by diligent (and tedious) examination of texts and chance allusions sprinkled throughout the description. Perhaps this is in part due to the INDO-EUROPEAN bias some grammarians have and in part to the fact that equatives are often unmarked for degree. Nevertheless, based on the somewhat meager information available to me, I have attempted to subject equative markers to the same sort of semantic analysis applied to comparatives and superlatives.

The major type is clearly a construction identified by a degree-like marker expressing similarity, identity or equivalence (LIKE). The marker may take various forms according to the structure of the language as these examples demonstrate:

Preposition in MALAGASY: hendry tahaka ny rainy izy "is-good as his father he".

Adverb in McDONNELL RANGE (Australia): nana tera mala knira naramanga 'these two equally large are'.

Postposition in TAMIL: avanai-ppōl nānum yōkkiyan "him-like I am-honest"

Verb in GUMBAÍNGAR: ja:maŋga du:wa íringingurái "these boomerangs are-similar".

Reduplication of the standard of comparison in MALAY: pĕrĕmpuan tinggi laki-laki "woman tall man-man" 'The woman is as tall as the man.' For MALAY, Winstedt (1945, 8-9) also cites a construction in which "equality of degree... is expressed... by order of words, antithesis and intonation" as in: rumah besar gunong "house big mountain" 'a house as big as a mountain'. However, word order is apparently only a partial explanation. Since the normal word order in attributive noun phrases is head noun + attribute and predicate adjective + subject noun in zero-copula predication, it seems likely that the head noun in this kind of equative construction is qualified by an adjectival predication functioning as a noun attribute, much as with ENGLISH constructions like ice-cold lemonade (= a lemonade as cold as ice).

Found somewhat less frequently are equative constructions marked by relative or relative-derived conjunctions. Thus in JAPANESE, the subordinating conjunction to may be used: anatawa Tanaka san to onaji gurai futotte imasu "you Tanaka Mr. as same approximately fat are" 'You are as fat as Mr. T.' In FRENCH, the relative que, identical in form with the interrogative, is used: il est aussi fort que Jean. Perhaps typologically related to the interrogative-instrumental are instrumental or instrumental-comitative devices found in several languages sampled such as the preposition le in MODERN IRISH of Rathlin Island, ta e kɔ koməsax le dʌn' eri "he is as powerful with anybody" ($\lambda = 8, 1$).

A bit less common than the relatives were genitive-marked standards or standards used attributively in a few instances. Both types are found in TURKISH equatives marked for degree with kadar 'as much as'

(< ARABIC for 'amount'). When the standard is a pronoun, the genitive is used; when it is a noun, the absolute is used, i.e. attributively to kadar: onun kadar zengin "his as-much-as rich" 'as rich as he' and: fil kadar iri "elephant as-much-as huge" 'as huge as an elephant'.

The apparently unique case found in LAK bears mention. In this language, there are two specialized equative markers. One emphasizes the relationship between the two items under comparison, the other the relationship between the two items and the qualitative. In addition, the item compared (i.e. the subject of the predication) is marked by a special case suffix instead of the normal nominative (subject of intransitive verb) or genitive (subject of transitive verb). Thus the following sentence with the first suffix -k's·a: us·ugu s·ük's·a q'ins·a uri, might be translated as 'The brother is as good as the sister.' but the same sentence with the second suffix -k'unā (which is marked for subject concord), us·ugu s·ük unā q'ins·a uri, could be translated as 'The brother is good like the sister.'

4.5 Comparison of the different kinds of standard markers found in the three basic constructions, comparative, superlative and equative, shows marked similarity between comparative and superlative and generally dissimilarity between equative and either of the other two. Thus the most important type of markers found in both comparative and superlative constructions is the ablative. Both also include genitive, partitive and locative types but with certain differences in frequency of occurrence and possibly semantic interpretation. Whereas these types are relatively infrequent in comparative constructions, they are quite important in superlative constructions. Most partitives and genitives occurring in comparative constructions are probably used in an ablative or contrastive function while in superlative constructions the function often seems to be partitive. Furthermore, a study of the incidence of formal identity or partial identity of standard markers in the 30 languages for which sufficient data on all three basic constructions

were available shows that, while 18 languages share markers in comparative and superlative constructions, seven do in comparative and equative constructions (and six of these have alternative comparative or superlative markers not identical with equatives) and only one in superlative and equative constructions.

On the other hand, negative or negative-derived and relative markers, of such importance in comparatives, were conspicuously absent in superlatives. Datives, which figure as a major type in comparatives are of low frequency in superlatives. This observation, combined with the lack of relatives, leads us to the conclusion that sociatives in general do not constitute an important feature of superlative constructions. Pure relational markers (see pp.129-130) are found as minor types in both comparatives and superlatives but not at all in equatives. This may be some indication as to an underlying contrastive (rather than sociative) element in many of the relational markers.

Equatives differ from comparatives and superlatives almost totally except for two categories, genitive and relative. They share the genitive with both of the other constructions but the evidence at least sometimes points to an attributive function as opposed to a partitive or ablative function in the others. Relatives, a common type in comparatives, are proportionately rarer in equatives. However, this does constitute a shared type between the two as opposed to superlatives.

5. Degree markers

5.1 As was the case for standard markers, degree markers occur in a broad variety of superficially distinct semantic types. However, if we omit the fairly numerous uniquely or very rarely occurring types, the remaining ones can be grouped into a manageable number of classes. Starting with comparative constructions, by far the most frequently occurring type consists of a form that specifically denotes a greater or lesser degree (ER) of the quality of quantity in question yet does not,

except perhaps by implication, mark the standard of comparison. The ENGLISH suffix -er or preposed adverb more are typical. Other formal types encountered include postposed adverb, as in KANURI: átáma tútúro ŋgálà go "this that-dative is-good -er" 'This is better than that.'; vowel pattern, as in SYRIAN ARARIC (no formal distinction between comparative and superlative, both being marked by the so-called elative pattern): bēton ɻawsaq mən bētna "their-house [is] larger from our-house" (compare the underlying form of the adjective wāseq); and, uniquely in GEORGIAN, a combination of prefix and suffix: maθraq^{hi} ... umsq^{hosi} mklavisa "whip ... bigger arm-of [=than]". The ER-type degree marker may be restricted to occurrence in comparative constructions as is generally the case with affixes like ENGLISH -er, although not always. In CLASSICAL ARABIC, for instance, the elative pattern is primarily used to mark the comparative or superlative degree as in SYRIAN ARABIC above; but it is also found in many non-comparative qualitatives referring to colors and bodily afflictions or other unusual physical characteristics. Historically, these appear to be metaphorical extensions of the original comparative function of the elative. On the other hand, this type may not be limited to qualification of the qualitative but may also occur as an independent quantitative like ENGLISH more. This would seem to apply generally to free forms. Closely related semantically to this class of markers is the SURPASS type noted above (4.2) and one involving the use of a marker meaning 'above-over' as in XHOSA: banamandla ngaphezu kwethu "they-are-strong above relational-loc.-us" 'They are stronger than we.' The only other example of anything quite like this was found in some LIVONIAN dialects as a relatively rare construction: tāmā ul mind om kantim "he over me is strong", where ul "over" appears to function as a standard marker.

The remaining major type of comparative degree marker is zero, i.e. comparison is indicated solely by the standard marker and possibly the implied range of comparison in the positive (see 2.1). This class

includes a small number of cases with degree-like standard markers such as MORE or SURPASS which, if analyzed differently (see 4.2), would not be regarded as zero-degree markers. However, even omitting these possible pseudo-examples, the zero-degree type must be considered a major and widely distributed one. Thus, for example, in GREENLANDIC ESKIMO it occurs with an ablative: nanu tuytumit añaipaq "bear reindeer-from is-big" 'A bear is bigger than a reindeer!'; in GUJARATI, with a comparative (see example in 4.2); and in NUER, with a comitative: díid né yán kék ji "big am I with you" 'I am bigger than you.'

5.2 In superlative constructions, the most frequently encountered kind of degree marker was either the ER of the comparative (i.e. formally identical, as noted for the ARABIC elative above) or the ER plus an additional element. Thus in TSWANA, one way of indicating the superlative degree is by reduplicating the ER adverb: tl̩u ethata bogolo-bogolo m̩diph̩l̩g̩l̩ng "elephant strong more-more loc.-animals" 'The elephant is the strongest of the animals.' In SINHALESE, the ER adverb is optional but the emphatic particle is obligatory: m̩ lámayā h̩ma lámayinta ma v̩dā hoñda y 'this boy all boys-dat. emphatic ER good is' 'This boy is the best of all.' ER is also found with an unidentified (i.e. by me) element in RUSSIAN, POLISH and HUNGARIAN among others. Thus in HUNGARIAN, the element leg- is prefixed to the ER qualitative as in legolcsóbb 'cheapest' (versus olcsóbb 'cheaper'). In RUSSIAN, in addition to the naj + comparative adjective superlative normally used only with a few "children's adjectives"), there is a similar construction in which the additive sam 'same' (also emphatic, 'self') is used:¹⁰ on sámyj lúce vs'ex "he [is] same better of-all". The ER or ER-additive type is of particular interest because it once more demonstrates the close relationship that generally exists between comparatives

¹⁰ Ziemer (footnote, p.11) notes the existence of similar constructions employing an element meaning 'self' (emphatic) in comparatives in BUNDA and SECHUANA.

and superlatives. Also, since I have come across no example of the converse, i.e. a specialized superlative degree marker used to designate the comparative, it is clear that a superlative may be derived from a comparative marker but not the converse. This observation lends additional support to the markedness hierarchy already noted by Greenberg (1966, 82) and Canger (1966, 159) among others, viz., superlative is marked with respect to comparative and, since comparative may be marked with respect to positive but not the converse (see 2.1), the comparative is marked and the positive is unmarked. MORE or SURPASS types, similar in content to the ER superlatives, are also found, but far less frequently.

Almost as common as the ER or ER-derived type is the unmarked superlative as in KANNADA with a locative-marked standard: i:mənd æ:ga awa sa:næ "these-people-loc. he is-wise" 'He is the wisest among these people.'; or ZULU with a relational-marked standard: umkhomo mkhulu kunazo zonke izilwane "whale is-big with-respect-to-them all animals". Here, as with the comparatives, there may be a few pseudo-examples of the MORE or SURPASS type but they do not seriously affect the overall frequency of zero-degree markers.

Not quite as much in evidence as the preceding class, but still well represented in the present sample, are those markers specialized to denote superlative degree only (EST), analogous to ER for the comparatives. To this type belong ENGLISH -est and most, LATIN -issim- (see example in 2.6) and FINNISH -in in: Mikko on pojista vanhin. "Michael is boys-from oldest".

Another fairly common type consists of essentially emphatic or intensive forms like very or too in ENGLISH used as systematic superlative degree markers (VERY). These are of course also widely used with even greater relative frequency as designators of absolute superlatives in many languages. Thus, in KANURI, the superlative may be formed with an ER adverb (see above) or with zaurò 'very':

maiya Bornóvè zâurò nogátâté fâlnza "king Bornu-of very known their-one" 'He is one of the best-known kings of B.' In TAMIL, the suffix -um 'too, even' is used (see example in 4.3).

In a number of languages, there are characteristic restrictions of occurrence on definiteness markers in superlative vis-à-vis comparative constructions. When this is the case, the superlative is always marked for definiteness, whereas the comparative may be optionally or obligatorily indefinite (or simply unmarked). Since definiteness must be considered a marked category, this sort of restriction provides further evidence in support of the markedness hierarchy (see 5.2). Generally speaking, the qualitative is marked for definiteness but there are rare exceptions to this. Thus in TARTAR, the standard of comparison must take the suffix -neŋ which otherwise marks the definite possessor. In XHOSA, the emphatic demonstrative or the substantive form of the personal pronoun, referring to the item being compared, marks the adjective both in terms of degree (emphatic) and definiteness (by anaphora or the demonstrative). In DANISH, the comparative is always indefinite, the superlative definite. In FRENCH, the formal difference between comparative and superlative adjectives is the presence of the definite article with the superlative. While specific information on the association of definiteness with the superlative category was only available for some of the languages sampled, it seems reasonable to suppose that, given more detailed study of cooccurrence restrictions in comparative and superlative constructions in the remaining languages examined and also in others, the definiteness factor might well turn out to be a universal or near-universal feature of superlatives.¹¹

5.3 Among equatives, the unmarked type is statistically the most frequent. This may, however, be misleading since the great majority of these have standards in constituency with LIKE-type markers (4.4,

¹¹ In this connection, see also Moravcsik's remarks (1969: 83).

see also for examples) which otherwise constitute one of the two commonest kinds of equative degree markers. Thus LIKE as a degree marker in conjunction with a genitive-marked standard occurs in TAGALOG: siyá'y mabaít pára ni Pédro "he [is] intelligent likeness of P."; or with a comitative-marked standard in MANDARIN (see example in 2.2). Perhaps semantically related to LIKE is a rare type characterized by an element meaning 'one (numeral)' as in FINNISH yhtä, the partitive singular of 'one'; hän on yhtä vanha kuin minä "he is of-one [= as] old than [= as] I".

The other major type includes demonstratives, demonstratives of degree, demonstrative-derived forms or historical demonstratives like LATIN tam or SPANISH tan, as in él es tan grande como yo 'He is as as big as I.' Somewhat similar to this type is the MODERN IRISH kɔ/xɔ (cf. kɔ 'which, what') in equative constructions (see 4.4).

The last type, which is not very frequent, consists of a form usually translatable as 'much' or 'as much as' like TURKISH kadar (see 4.4) or the adverb nga 'as great/large as' in XHOSA: nga ngendlu "as-large-as instr. -house". This kind of marker is analogous to the independent quantificative or MORE type noted for comparatives and superlatives (5.1).

5.4 In summary, comparative and superlative degree markers tend to share some of the most important features: the ER type and ER derivatives and the similar MORE or SURPASS type, but differ with respect to a specialized EST type and a VERY type for superlatives. In confirmation of our original premise (3.1), all three basic comparative types are unmarked for degree in many languages, although for the equative, dependent largely upon how LIKE-type standard markers are analyzed, this may not be as common as it appears. In all other respects, the equative markers are quite different in character from those of the comparative and superlative. A study of the incidence of formal identity of degree markers paralleling the one performed for

standard markers (4.5) and based on the same 30-language sample shows even greater uniformity between comparative and superlative than was the case for the standard markers. Thus 18 languages have identical markers in the comparative and superlative degrees against only one as between equative and superlative and none as between comparative and equative.

6. Suppletive qualitatives

Suppletive paradigms furnish yet another link in the chain of evidence relating comparative and superlative on the one hand and positive and equative on the other. Thus examination of suppletive bases in 20 languages showed remarkable consistency in terms of comparative-superlative and positive-equative shared bases. In OLD IRISH and WELSH, the GOOD paradigm shows a different base for each of the four grades and, uniquely in WELSH, the paradigms for SMALL, NEAR and QUICK show shared bases in the equative, comparative and superlative. In GERMAN, the SOON paradigm (bald - eher - baldigst) has the same base in the positive and superlative -- a major exception to the overall pattern. In all remaining instances, the general rule prevailed. Thus suppletive paradigms in the comparison of adjectives almost always imply formal identity or near-identity of the bases shared by the comparative and superlative vis-à-vis those shared by the positive and equative.

In terms of lexical content, the adjectives most prone to suppletion are: GOOD, BAD, MUCH and LITTLE. Of these, GOOD seems to be especially subject to suppletion, the only exceptions found in this sample being MODERN GREEK and HUNGARIAN.

APPENDIX I

Standard and Degree Markers

Listed below are all the languages sampled for which information on the occurrence of standard and degree markers in the context of one or more of the basic comparative constructions was available. The marker types are referred to by categorical tags intended to roughly characterize the underlying semantic notions involved. Constructions composed of negation of an equative to produce a comparative or of a comparative to produce an equative have been omitted. Caps are generally used to denote semantically related lexical or, in the case of ER and EST, inflectional markers having the general content indicated by the tag. Hyphen (-) links combined functions; slash (/) separates alternative marker types. Column headings are S for standard marker, D for degree marker and def (+) for definite-marked superlative construction. Other symbols used have the following values:

abl	ablative, separative	dem	demonstrative
acc	accusative	dim	diminutive
adv	adversative	emp	emphatic, intensive
allat	allative	ER	marks degree of comparison only
ant	antonymous qualitatives	EST	marks superlative degree only
approx	approximative	gen	genitive, possessive
attr	attributive	ident	identical or synonymous qualitatives
aug	augmentative	instr	instrumental, manner
caus	causative, conditional	int	interrogative
cf	comparative, i.e. used solely in comparative function or otherwise unidentified	loc	locative
com	comitative	neg	negative or containing a negative
contr	implicit contrast between item compared and standard in quasi-paratactic sentences	obl	undefined complement case
dat	dative	P	parataxis
		par	partitive
		pure	broad or "pure" relational
		rel	relative

Language	S	Comparative D	S	Superlative D	def	S	Equative D
Abkhaz	abl-gen	Ø					
Agta	caus-obl	VERY					
Amharic	abl	ER	abl	ER	abl		
Anewan	P-ident	ER					
Arabic: Cl.	P-ant	Ø					
Egyptian	abl	ER	abl	ER	loc	Ø	
Syrian	abl	ER	abl	ER	+	LIKE	
Aranda	abl ₁ + abl ₂	ER	abl	ER	AS	SO	
Armenian	abl	MORE			LIKE	Ø	
Bād					*one	LIKE	
Basa							
Basque	cf<*same/only + ?	ER/emp	gen/ par	EST<*gen pl	cf<*same/only + neg+dem+gen	Ø	
Bengali	abl	Ø			*rel?		
Bundeli	abl-instr	Ø	abl-instr	Ø			
Burushaski	abl	Ø	abl	Ø			
Cheremis	abl	+ER					
Cherokee	P-ant	Ø					
Chitimacha	P-neg	ER					
Chuvash	P-ident	ant					
Coptic	abl	MORE					
	dat/pure	- +ER	*pure	Ø			

Language	Comparative		Superlative		Equative	
	S	D	S	D	S	D
Dalabon	P-ant	Ø				
Danish	cf < *rel-neg	ER				
Dayak	gen? abl?	Ø				
Dieri	dat	ER				
Dinka	P-ident	VERY				
English	cf < *rel-neg	ER				
Eskimo	abl/ gen	Ø				
Estonian	rel < *int-instr	ER				
	abl < *par < *abl	ER				
	P-adv/ -ant	ER				
Finnish	rel < *int-instr	ER				
	abl/ par < *abl	ER				
	gen	ER				
	P-ant	ER				
French	rel-int-neg	ER				
Georgian	gen	ER/MORE/VERY				
	dat-acc	+	"	"		
	rek*ALL+SELF	ER				
German	abl/cf	ER				
Gipsy		SURPASS				
Grebo	abl/gen	ER				
Greek	abl	Ø				
	adv < *pure	ER				
Gujarati	abl/cf/loc	Ø				

Language	Comparative S	Comparative D	Superlative S	Superlative D	def	S	Equative D
Gumbaíngar	P-ant loc neg P-ant	+VERY +ER+VERY Ø	loc	EST Ø	P-ident	LIKE Ø	
Gundungurra							
Hausa		SURPASS	loc	SURPASS	com	allat	REACH
Hebrew	abl	Ø	abl/attr gen	Ø Ø	+ allat	LIKE rel-MUCH?	
Hungarian	cf<*int? abl/loc	ER ER	loc/gen	EST+ER acc com cf/rel	cf <*int? SO SO <*int-rel? LIKE	*one	
Ingrian	rel<*int-instr abl/par<*abl P-ant	ER ER ER					
Irish: Old Mod.	abl/dat<*abl cf<*neg abl/pure neg P-adv	ER ER ER Ø approx VERY					
Japanese							
Jiwadja	dat	Ø	loc	Ø	ER	SO SO <*int-rel? LIKE	
Kannada	dat	Ø?	gen/abl	VERY	+?		
Kanuri		ER	gen	SURPASS			
Karelian	rel<*int-instr par<*abl P-ant	ER ER ER					

Language	Comparative		Superlative		Equative	
	S	D	S	D	def	D
Kinyanza	P-contr	Ø	P-contr	Ø		
Koko-Ymidir	P-ident	ER				
Konkow		SURPASS				
Korean	rel? < SEE					
Kui						
	dat					
	P-ident					
Kurnu	P-ant	Ø				
Lak	cf	Ø				
Lao		MORE				
Lapp	rel < *int-loc?	ER				
	abl/par/gen	ER				
	P-ant	ER				
Latin	abl/int-rel	ER				
Lithuanian	abl/neg	ER				
Livonian	rel < *int-instr	ER	abl			
	^{+neg} abl/ABOVE	ER	gen			
	P-ant	ER				
MacDonnell Range	abl	ER				
Malagasy	caus	± MORE				

Language	Comparative S	Comparative D	Superlative S	Superlative D	def	S	Equative D
Malay	abl+loc	+ER	abl P-contr	ER	com	LIKE	LIKE<*one?
Maltese	abl	ER			attr		ER
Mandaic: Cl. mod.	abl	Ø			LIKE	< *AS+rel	
Mandarin	pure<loc-illat? cf P-contr?	+SURPASS +ER +ER	loc	+EST	MUCH<*BE gen	SO< dem	
Mongolian	abl	Ø			LIKE	LIKE	
Mosquito	P-neg	Ø					
Nuer	com		P-adv P-adv+loc				
Ostyak	P-adv/-ant abl/cf P-ident	Ø VERY	SURPASS	com			
Paiute, S.					LIKE<*com?	LIKE	
Pitjantjara	P-adv	ER					
Polish	cf<neg-emp cf<*rel?	ER ER ER ER	gen-par	EST+ER	cf	SO <*dem	
Russian	cf<int-instr gen	ER ER	gen abl	ER EST/*SELF+ ER	int-rel	dem-emp	
Samoan	Pure	SURPASS	pure?<abs:dem	SURPASS			
Samoyedic	abl	+dim/prosec	abl	aug			
Sanskrit	neg abl/gen/instr	+ER ER	gen	ER+?			

Language	S	Comparative D	S	Superlative D	S	Equative D
Sinhalese	dat	ER	dat/abl	ER+temp		
Sotho, S.	cf-com	Ø	gen	SURPASS		
Spanish	int-rel	ER	gen/abl	Ø		
	gen-abl	ER				
	abl	Ø				
	abl	Ø				
Sumerian	pure	+ER	gen-abl	Ø	+ int-rel	SO < *dem?
	pure	SURPASS<ER				
Tamil	dat/loc/abl	Ø	pure	+ER/one	+ gen/AS	one
	pure	SURPASS<ER			gen	LIKE
Tatar	abl	loc				
	+ER	VERY				
	Ø	EST				
		+				
Telugu	cf/dat-loc	Ø				
Thurrawal	P-ant	+VERY				
	cf < loc	directional				
Tongan		cf < loc				
		direct+temp+				
		+				
Tswana	SURPASS	SURPASS	cf < loc			
	loc-gen	ER				
	abl	ER/dim				
Turkish	abl	+ER	loc-gen	SURPASS	ER+ER	LIKE
Vietnamese	MORE?	SURPASS				
	rel<*int-instr	ER				
	par < *abl	ER				
Vote		MORE	par	perfective	dat/gen	MUCH
Wamba Wamba	P-ant	Ø		ER/SELF	MUCH	MUCH

Language	Comparative		Superlative		Equative		
	S	D	S	D	def	S	D
Weish	cf < *neg ₊ AS	ER	gen-par?	EST	*SELF?	+ AS	SO
Worrora	abl	Ø	loc	Ø	emp	+? instr	LIKE/MUCH
Wunambal	P-ant	Ø	loc	Ø			
Xhosa	pure	Ø	ABOVE	Ø			
Yakut	loc-gen	Ø		Ø			
Yurak	cf	Ø		Ø			
Zulu	abl	Ø	pure	Ø	+? pure < approx	Ø	

APPENDIX II
Summaries of Hypotactic Marker Types

Figures represent the number of languages exhibiting the category in the left-hand column. For symbols used, see Appendix I.

Marker	Standard Marker Types:		
	Comparative	Superlative	Equative
abl	44	20	1
acc			1
allat			2
ALL+SELF	1		
approx			1
AS			4
AS-gen			1
AS-rel			1
attr		3	3
BE			1
caus	1		
caus-obl	1		
cf	11	1	4
dat	11	3	2
dem-abs		1	
gen	6	14	5
instr		1	1
instr-com	2		4
int-instr	9		2
int-neg	1		
int-rel	3		5
LIKE			15
loc	5	15	
loc-gen	2	1	
MORE	4	2	
MUCH			1
neg	6		
neg-approx	1		
neg-BE	1		
neg-caus	1		
neg-emp	1		
neg-rel	2		
obl		1	
one			2
par	6 (<*abl)	2	
par-gen		2	
pure	8	4	
rel			1
SEE	1		4
SURPASS	5	3	
ABOVE	1		
SAME	1		
SAME-neg-dem-gen			1

Marker	Degree Marker Types		
	Comparative	Superlative	Equative
ABOVE	1		
allat			1
ALL+SELF			1
AS			1
aug		2	
com			1
dem			9
dem-emp			1
diminutive	4		
directional	1		
ER	49	14	2
ER+ER		1	
ER-emp	1	3	
ER+SELF		1	
ER+		2	
EST		12	
int-rel	4		1
LIKE			10
MORE		1	
MUCH			5
MUCH?-rel			1
one			2
par		1	1
REACH			1
SELF		1	
SIZE			1
SO			2
SURPASS	2	4	
VERY		4	
VERY+directional		1	
Ø	35.	18	21

APPENDIX III

Formal Identity or Near-Identity of Markers

(based on 30-language sample -- see p.134)

Standard Markers

1. Different in all three constructions: Basque, Bundeli, Danish, English, Finnish, German, Greek, Gujarati, Gumbaíngar, Hausa, Hebrew, Hungarian, Japanese, Kanuri, Lao, Latin, Malay, Mandarin, Nuer, Polish, Russian, Spanish, Tamil, Telugu, Tswana, Welsh, Xhosa.
2. Identical in comparative and superlative constructions: Arabic (Syrian), Bundeli, Greek, Gumbaíngar, Gujarati, Hebrew, Hungarian, Lao, Malay, Nuer, Russian, Spanish, Tagalog, Tamil, Telugu, Tswana, Zulu.
3. Identical in comparative and equative constructions: Finnish, French, German (rare), Hungarian, Latin, Nuer, Polish.
4. Identical in all three constructions: Amharic.
5. Identical in superlative and equative constructions: Hungarian.

Degree Markers

1. Identical in comparative and superlative constructions: Amharic, Arabic (Syrian), Bundeli, French, Greek, Gujarati, Hausa, Hungarian, Kanuri, Lao, Malay, Nuer, Polish, Russian, Spanish, Tagalog, Telugu, Tswana.
2. Different in all three constructions: Basque, Danish, English, Finnish, German, Gumbaíngar, Hausa, Hebrew, Japanese, Kanuri, Lao, Latin, Mandarin, Malay, Nuer, Tagalog, Tamil, Tswana, Welsh, Xhosa.
3. Identical in all three constructions: Zulu?
4. Identical in superlative and equative constructions: Tagalog.

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Abbreviations

AF	Anglistische Forschungen
ALLG	Archiv für lateinische Lexicographie und Grammatik
IF	Indogermanische Forschungen
IUPUA	Indiana University Publications, Uralic and Altaic Series
JAOS	Journal of the American Oriental Society
JL	Journal of Linguistics
JLSP	Janua Linguarum, Series Practica
JRSNSW	Journal of the Royal Society of New South Wales
JWAL	Journal of West African Languages
LSNA	Osgood, C. (ed.) Linguistic Structures of Native America Viking Fund Publications in Anthropology 6. New York. 1946.
OLM	Oceania Linguistics Monographs
WPLU	Working Papers on Language Universals

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